TITLE: DATA STORAGE MEDIUM HAVING
INFORMATION FOR CONTROLLING
BUFFERED STATE OF MARKUP ...
INVENTORS: Hyun-Kwon CHUNG et al
SERIAL NO.:
DOCKET NO.: 1793.1073

FIG. 1 (PRIOR ART)

- ③ AV DATA
- ⑤ AV DATA
- ⑥ AV DATA
- ② AV DATA
- ① AV DATA
- ④ A.HTM
- STARTUP.HTM

TITLE: DATA STORAGE MEDIUM HAVING
        INFORMATION FOR CONTROLLING
        BUFFERED STATE OF MARKUP ...
INVENTORS: Hyun-Kwon CHUNG et al
SERIAL NO.:
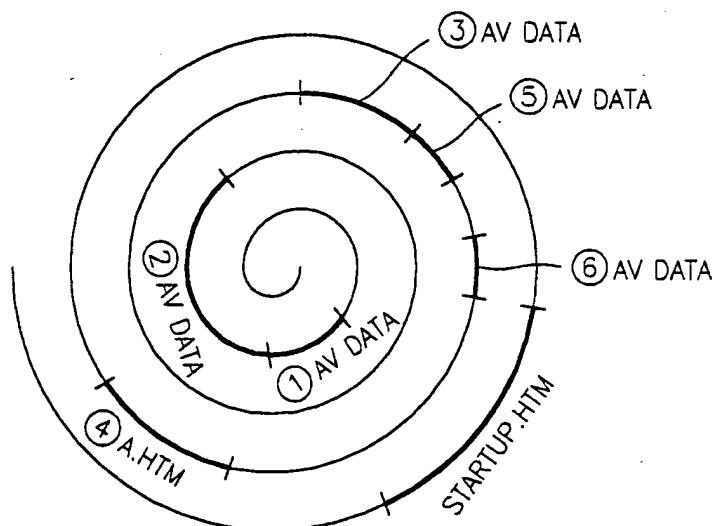DOCKET NO.: 1793.1073

FIG. 2 (PRIOR ART)

TITLE: DATA STORAGE MEDIUM HAVING
       INFORMATION FOR CONTROLLING
       BUFFERED STATE OF MARKUP ...
INVENTORS: Hyun-Kwon CHUNG et al
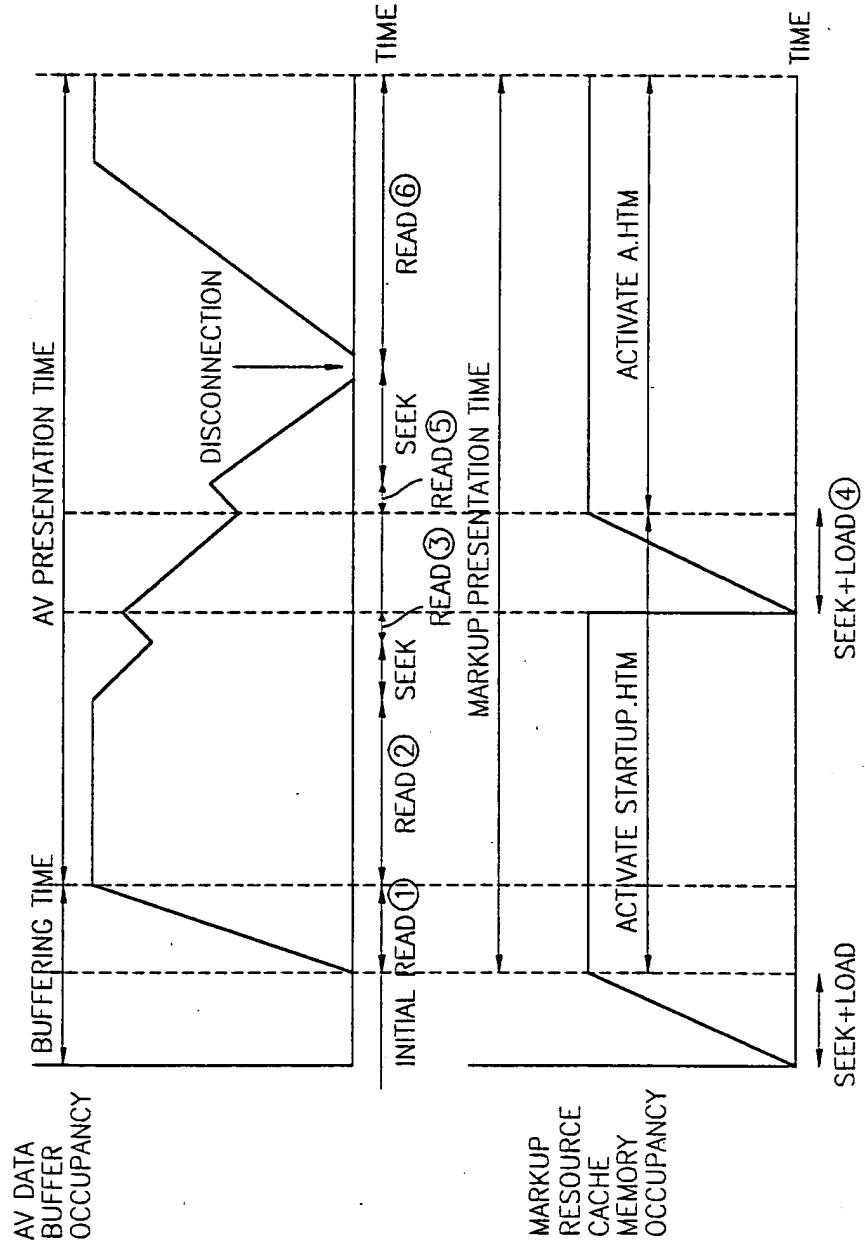SERIAL NO.:
DOCKET NO.: 1793.1073

FIG. 3

TITLE: DATA STORAGE MEDIUM HAVING
        INFORMATION FOR CONTROLLING
        BUFFERED STATE OF MARKUP ...
INVENTORS: Hyun-Kwon CHUNG et al
SERIAL NO.:
DOCKET NO.: 1793.1073

FIG. 4

ROOT DIRECTORY

VIDEO_TS

VIDEO_TS.IFO

VTS_01_0.IFO

VTS_01_0.VOB

VTS_01_1.VOB

⋮

DVD_ENAV

STARTUP.HTM

STARTUP.PLD

A.HTM
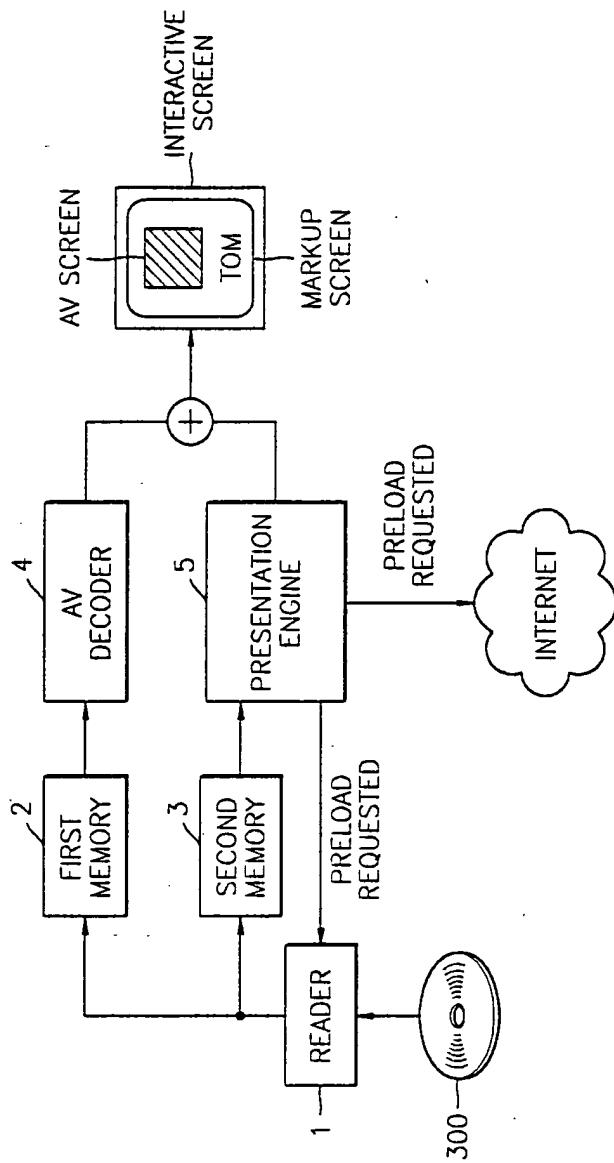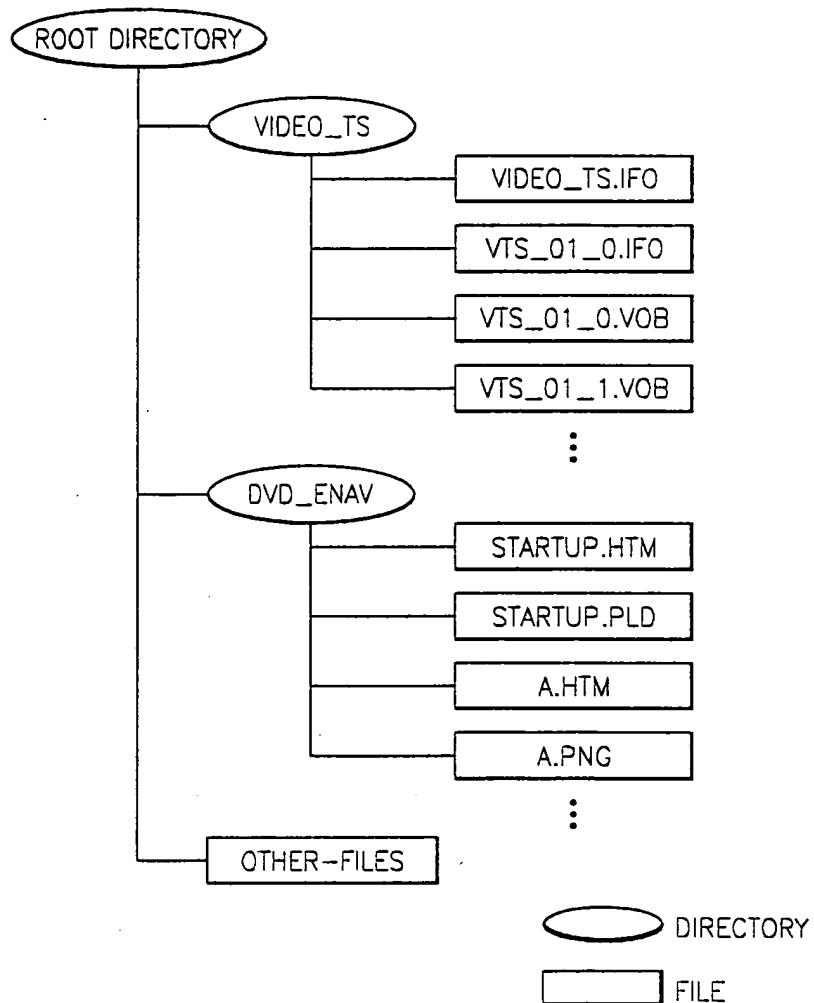
A.PNG

⋮

OTHER—FILES

⬭ DIRECTORY

▭ FILE

TITLE: DATA STORAGE MEDIUM HAVING
          INFORMATION FOR CONTROLLING
          BUFFERED STATE OF MARKUP ...
INVENTORS: Hyun-Kwon CHUNG et al
SERIAL NO.:
DOCKET NO.: 1793.1073

FIG. 5

VOLUME SPACE

VOLUME AND FILE CONTROL INFORMATION REGION	DVD VIDEO DATA	DVD INTERACTIVE DATA	OTHER DATA

VIDEO_TS.IFO/VTS_01_0.IFO/
VTS_01_1.VOB ...

STARTUP.HTM/STARTUP.PLD/A.HTM
A.PNG ...

TITLE: DATA STORAGE MEDIUM HAVING
INFORMATION FOR CONTROLLING
BUFFERED STATE OF MARKUP ...
INVENTORS: Hyun-Kwon CHUNG et al
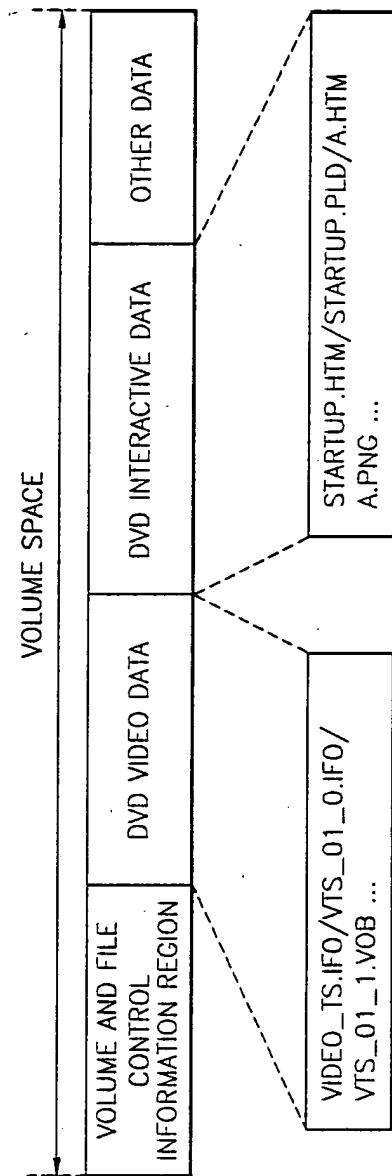SERIAL NO.:
DOCKET NO.: 1793.1073

FIG. 6

```
         ┌─────────┐
         │  START  │
         └─────────┘
              │
              ▼
┌──────────────────────────┐
│   READ MARKUP DOCUMENT    │──601
└──────────────────────────┘
              │
              ▼
┌──────────────────────────┐
│        INTERPRET          │──602
│    PRELOAD INFORMATION     │
└──────────────────────────┘
              │
              ▼
┌──────────────────────────┐
│       PRELOAD FILES        │──603
│     INTO CACHE MEMORY      │
└──────────────────────────┘
              │
              ▼
┌──────────────────────────┐
│   READ AV DATA AND STORE   │──604
│  AV DATA IN BUFFER MEMORY  │
└──────────────────────────┘
              │
              ▼
┌──────────────────────────┐
│     READ AV DATA FROM      │──605
│       BUFFER MEMORY        │
│     AND DECODE AV DATA     │
└──────────────────────────┘
              │
              ▼
┌──────────────────────────┐
│  READ FILES TO BE PRELOAD  │
│   FROM CACHE MEMORY AND    │
│   DISPLAY DECODED AV DATA  │──606
│ IN DISPLAY WINDOW DEFINED  │
│     BY MARKUP DOCUMENT     │
└──────────────────────────┘
              │
              ▼
         ┌─────────┐
         │   END   │
         └─────────┘
```

TITLE: DATA STORAGE MEDIUM HAVING
        INFORMATION FOR CONTROLLING
        BUFFERED STATE OF MARKUP ...
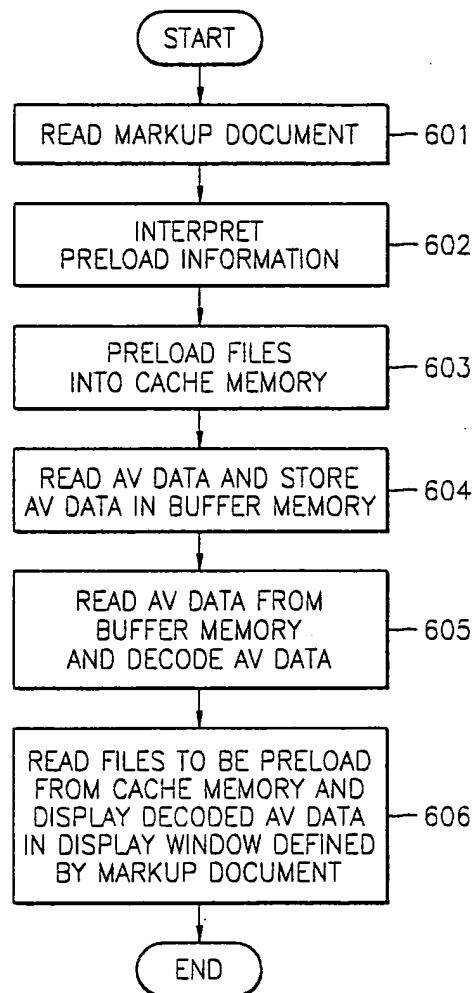INVENTORS: Hyun-Kwon CHUNG et al
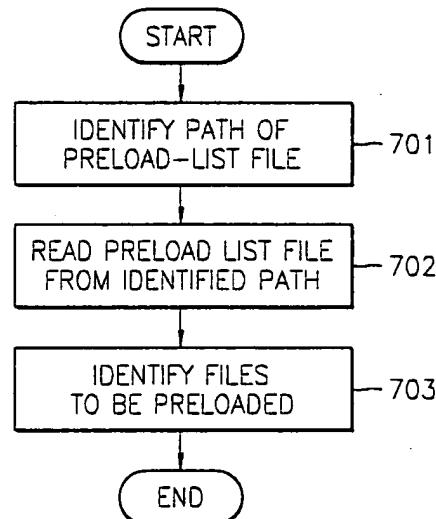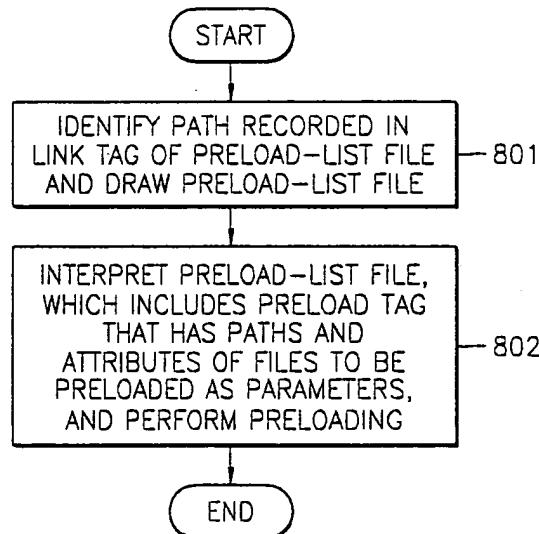SERIAL NO.:
DOCKET NO.: 1793.1073

FIG. 7

```
        ( START )
            │
            ▼
┌─────────────────────┐
│  IDENTIFY PATH OF   │── 701
│  PRELOAD-LIST FILE  │
└─────────────────────┘
            │
            ▼
┌─────────────────────┐
│ READ PRELOAD LIST FILE │── 702
│ FROM IDENTIFIED PATH  │
└─────────────────────┘
            │
            ▼
┌─────────────────────┐
│   IDENTIFY FILES    │── 703
│   TO BE PRELOADED   │
└─────────────────────┘
            │
            ▼
        ( END )
```

FIG. 8

```
        ( START )
            │
            ▼
┌─────────────────────────────┐
│  IDENTIFY PATH RECORDED IN   │
│ LINK TAG OF PRELOAD-LIST FILE │── 801
│  AND DRAW PRELOAD-LIST FILE  │
└─────────────────────────────┘
            │
            ▼
┌─────────────────────────────┐
│  INTERPRET PRELOAD-LIST FILE, │
│ WHICH INCLUDES PRELOAD TAG   │
│   THAT HAS PATHS AND         │── 802
│  ATTRIBUTES OF FILES TO BE   │
│  PRELOADED AS PARAMETERS,    │
│   AND PERFORM PRELOADING     │
└─────────────────────────────┘
            │
            ▼
        ( END )
```

TITLE: DATA STORAGE MEDIUM HAVING
       INFORMATION FOR CONTROLLING
       BUFFERED STATE OF MARKUP ...
INVENTORS: Hyun-Kwon CHUNG et al
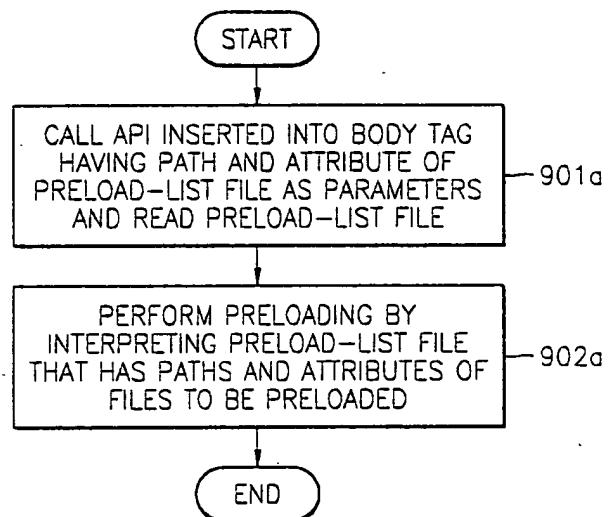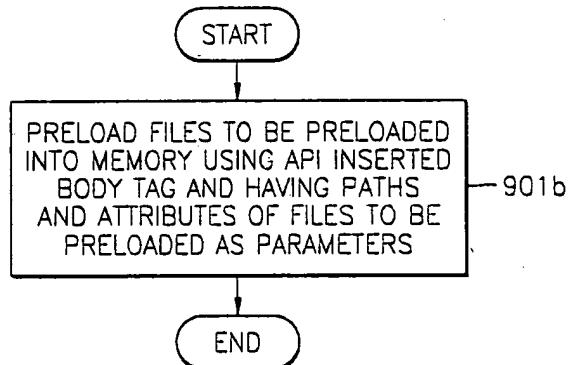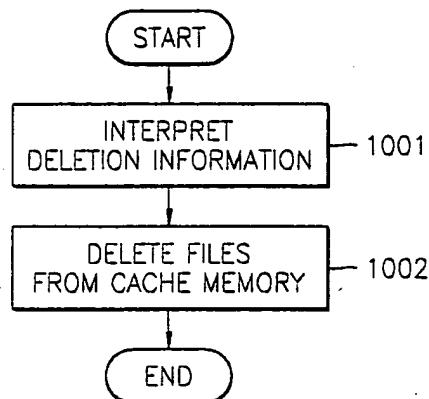SERIAL NO.:
DOCKET NO.: 1793.1073

FIG. 9A

```
        ( START )
           │
           ▼
┌─────────────────────────┐
│  CALL API INSERTED INTO BODY TAG  │
│  HAVING PATH AND ATTRIBUTE OF     │──── 901a
│  PRELOAD-LIST FILE AS PARAMETERS  │
│  AND READ PRELOAD-LIST FILE       │
└─────────────────────────┘
           │
           ▼
┌─────────────────────────┐
│    PERFORM PRELOADING BY          │
│  INTERPRETING PRELOAD-LIST FILE   │──── 902a
│  THAT HAS PATHS AND ATTRIBUTES OF │
│    FILES TO BE PRELOADED          │
└─────────────────────────┘
           │
           ▼
        ( END )
```

FIG. 9B

```
        ( START )
           │
           ▼
┌─────────────────────────┐
│  PRELOAD FILES TO BE PRELOADED    │
│  INTO MEMORY USING API INSERTED   │
│    BODY TAG AND HAVING PATHS      │──── 901b
│  AND ATTRIBUTES OF FILES TO BE    │
│    PRELOADED AS PARAMETERS        │
└─────────────────────────┘
           │
           ▼
        ( END )
```

TITLE: DATA STORAGE MEDIUM HAVING
        INFORMATION FOR CONTROLLING
        BUFFERED STATE OF MARKUP ...
INVENTORS: Hyun-Kwon CHUNG et al
SERIAL NO.:
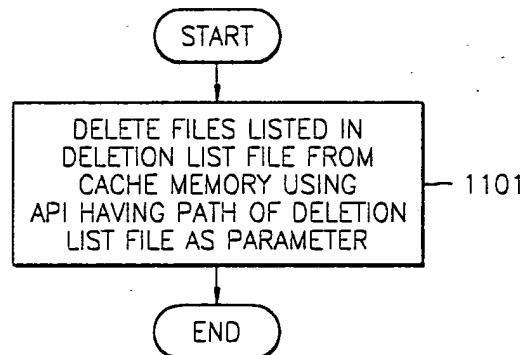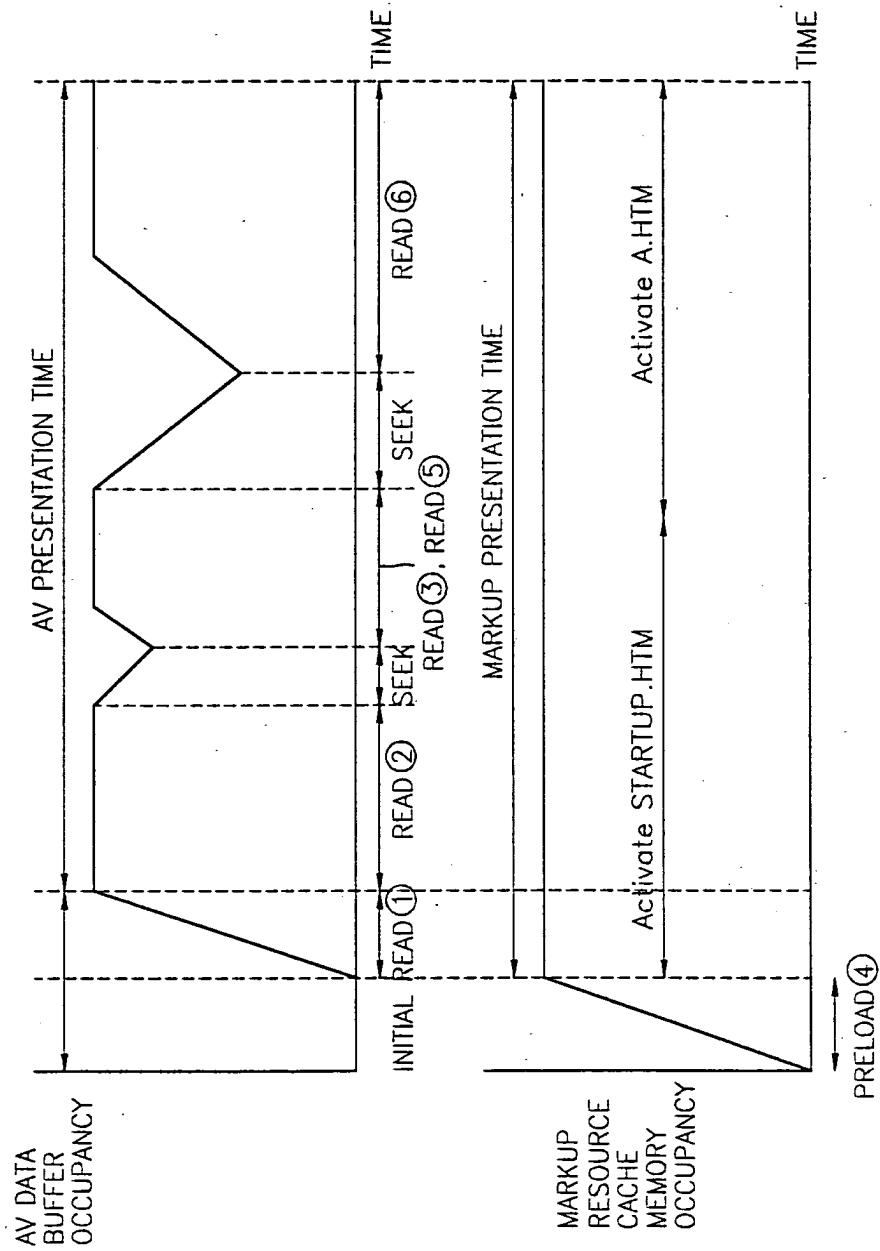DOCKET NO.: 1793.1073

FIG. 10

```
        ┌─────────┐
        │  START  │
        └─────────┘
             │
             ▼
  ┌────────────────────┐
  │     INTERPRET      │── 1001
  │ DELETION INFORMATION │
  └────────────────────┘
             │
             ▼
  ┌────────────────────┐
  │    DELETE FILES    │── 1002
  │  FROM CACHE MEMORY │
  └────────────────────┘
             │
             ▼
        ┌─────────┐
        │   END   │
        └─────────┘
```

FIG. 11

```
        ┌─────────┐
        │  START  │
        └─────────┘
             │
             ▼
  ┌────────────────────────┐
  │   DELETE FILES LISTED IN │
  │  DELETION LIST FILE FROM │
  │    CACHE MEMORY USING    │── 1101
  │ API HAVING PATH OF DELETION │
  │   LIST FILE AS PARAMETER  │
  └────────────────────────┘
             │
             ▼
        ┌─────────┐
        │   END   │
        └─────────┘
```

TITLE: DATA STORAGE MEDIUM HAVING
        INFORMATION FOR CONTROLLING
        BUFFERED STATE OF MARKUP ...
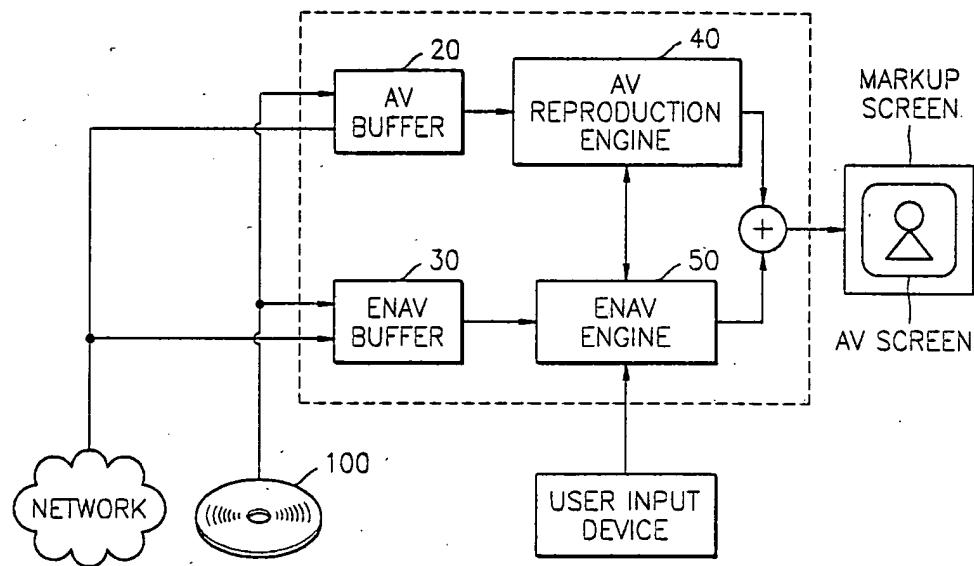INVENTORS: Hyun-Kwon CHUNG et al
SERIAL NO.:
DOCKET NO.: 1793.1073

FIG. 12

TITLE: DATA STORAGE MEDIUM HAVING
       INFORMATION FOR CONTROLLING
       BUFFERED STATE OF MARKUP ...
INVENTORS: Hyun-Kwon CHUNG et al
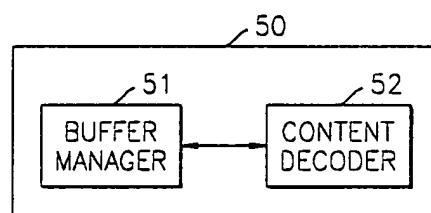SERIAL NO.:
DOCKET NO.: 1793.1073
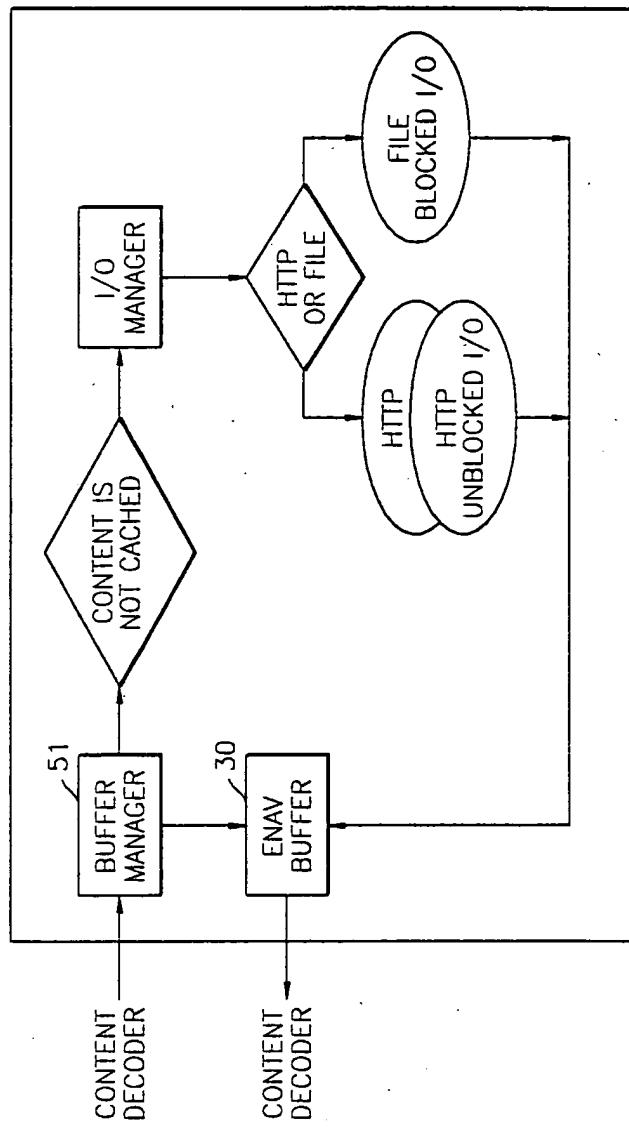
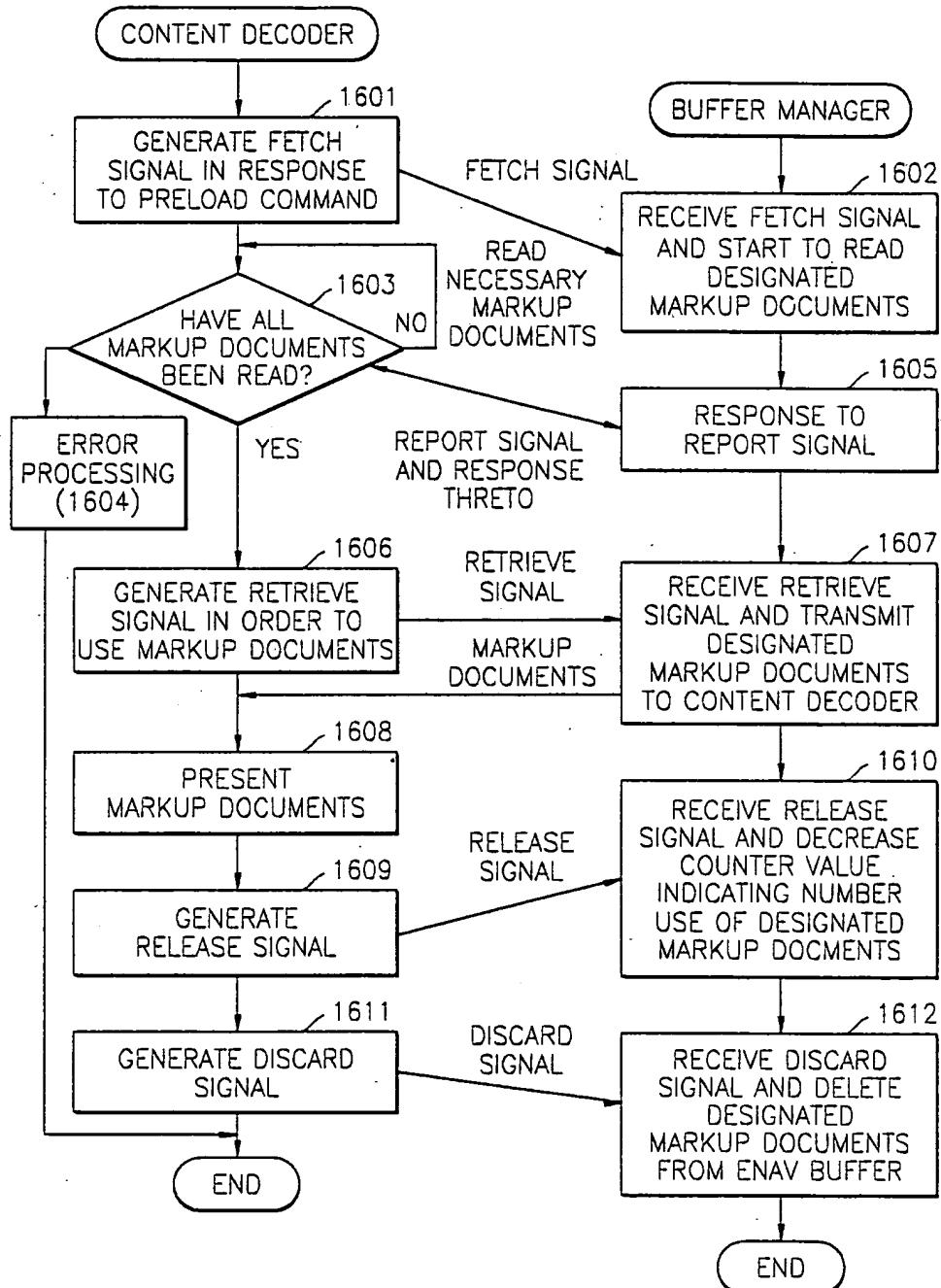# FIG. 13

FIG. 14

TITLE: DATA STORAGE MEDIUM HAVING
INFORMATION FOR CONTROLLING
BUFFERED STATE OF MARKUP ...
INVENTORS: Hyun-Kwon CHUNG et al
SERIAL NO.:
DOCKET NO.: 1793.1073

FIG. 15

TITLE: DATA STORAGE MEDIUM HAVING
       INFORMATION FOR CONTROLLING
       BUFFERED STATE OF MARKUP ...
INVENTORS: Hyun-Kwon CHUNG et al
SERIAL NO.:
DOCKET NO.: 1793.1073

FIG. 16

CONTENT DECODER

1601
GENERATE FETCH
SIGNAL IN RESPONSE
TO PRELOAD COMMAND

FETCH SIGNAL

BUFFER MANAGER

1602
RECEIVE FETCH SIGNAL
AND START TO READ
DESIGNATED
MARKUP DOCUMENTS

1603
HAVE ALL
MARKUP DOCUMENTS
BEEN READ?

NO

READ
NECESSARY
MARKUP
DOCUMENTS

YES

ERROR
PROCESSING
(1604)

REPORT SIGNAL
AND RESPONSE
THRETO

1605
RESPONSE TO
REPORT SIGNAL

1606
GENERATE RETRIEVE
SIGNAL IN ORDER TO
USE MARKUP DOCUMENTS

RETRIEVE
SIGNAL

MARKUP
DOCUMENTS

1607
RECEIVE RETRIEVE
SIGNAL AND TRANSMIT
DESIGNATED
MARKUP DOCUMENTS
TO CONTENT DECODER

1608
PRESENT
MARKUP DOCUMENTS

1609
GENERATE
RELEASE SIGNAL

RELEASE
SIGNAL

1610
RECEIVE RELEASE
SIGNAL AND DECREASE
COUNTER VALUE
INDICATING NUMBER
USE OF DESIGNATED
MARKUP DOCMENTS

1611
GENERATE DISCARD
SIGNAL

DISCARD
SIGNAL

1612
RECEIVE DISCARD
SIGNAL AND DELETE
DESIGNATED
MARKUP DOCUMENTS
FROM ENAV BUFFER

END

END

TITLE: DATA STORAGE MEDIUM HAVING
INFORMATION FOR CONTROLLING
BUFFERED STATE OF MARKUP ...
INVENTORS: Hyun-Kwon CHUNG et al
SERIAL NO.:
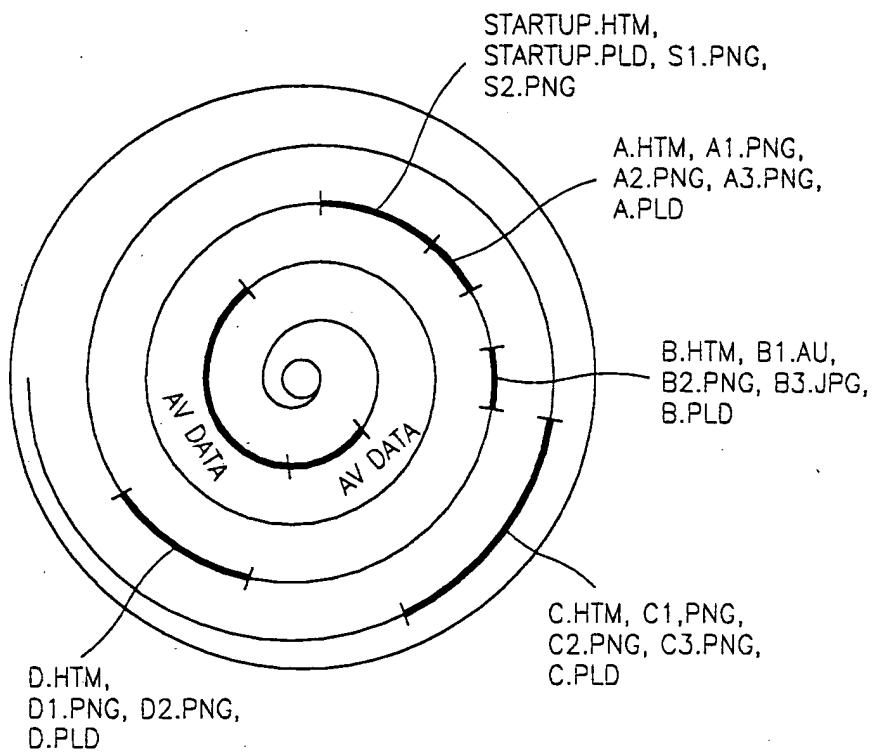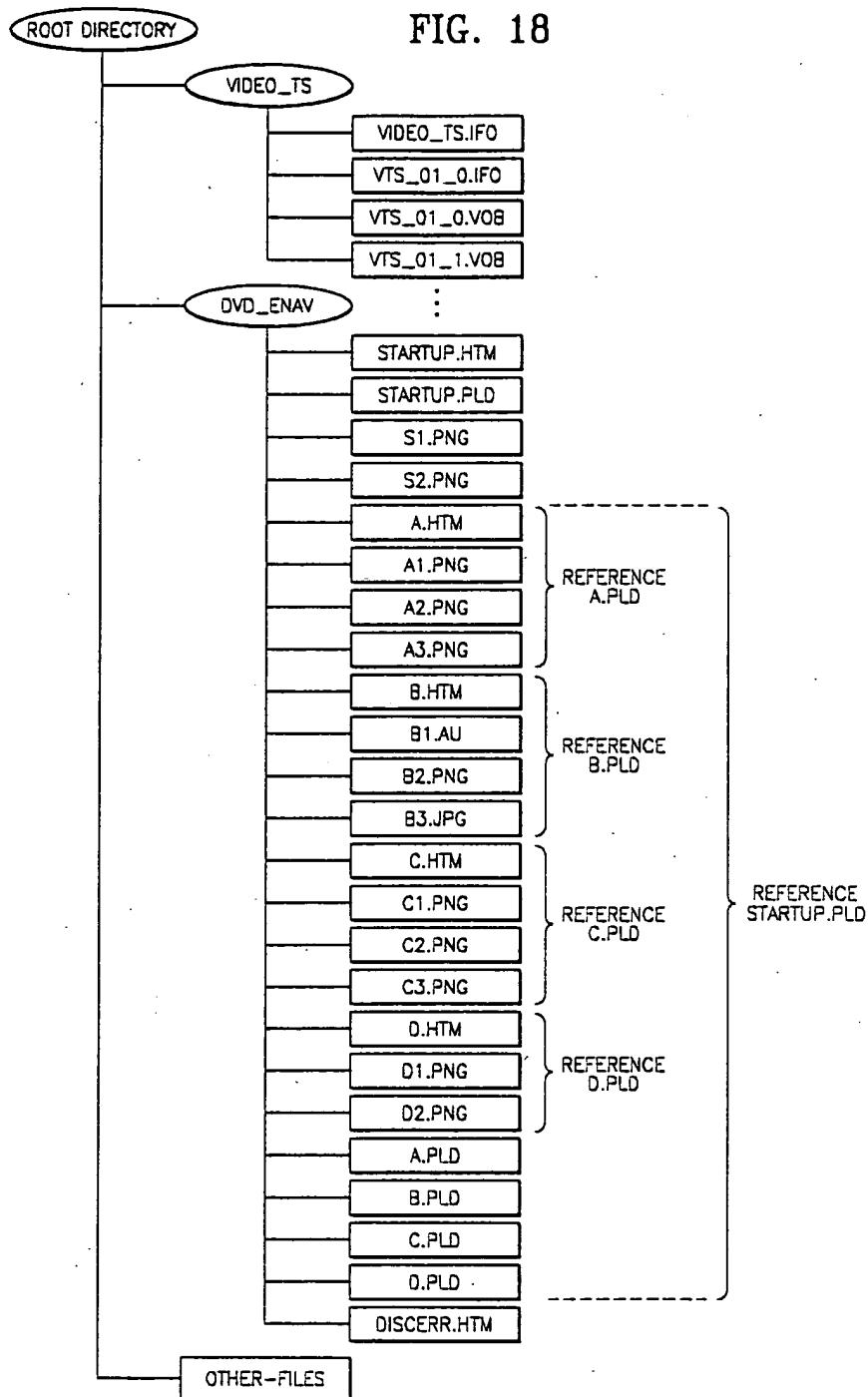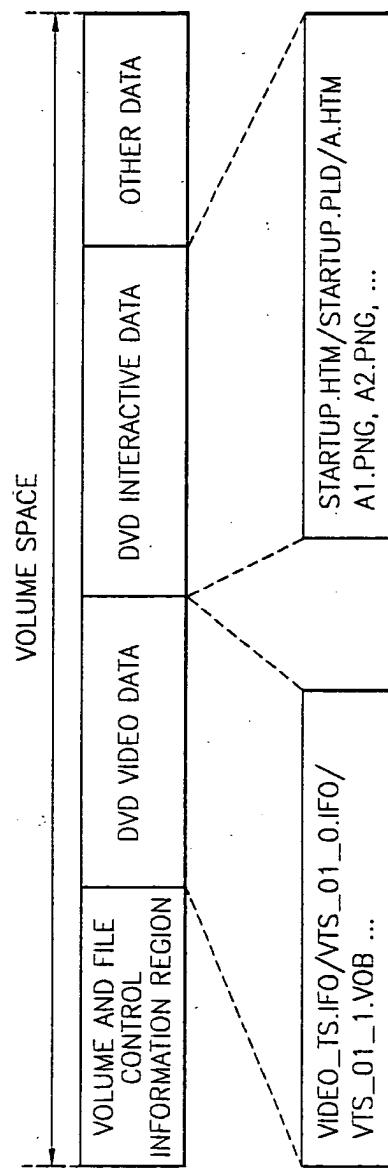DOCKET NO.: 1793.1073

FIG. 17

STARTUP.HTM,
STARTUP.PLD, S1.PNG,
S2.PNG

A.HTM, A1.PNG,
A2.PNG, A3.PNG,
A.PLD

B.HTM, B1.AU,
B2.PNG, B3.JPG,
B.PLD

C.HTM, C1,PNG,
C2.PNG, C3.PNG,
C.PLD

D.HTM,
D1.PNG, D2.PNG,
D.PLD

AV DATA

AV DATA

TITLE: DATA STORAGE MEDIUM HAVING
INFORMATION FOR CONTROLLING
BUFFERED STATE OF MARKUP ...
INVENTORS: Hyun-Kwon CHUNG et al
SERIAL NO.:
DOCKET NO.: 1793.1073

FIG. 18

TITLE: DATA STORAGE MEDIUM HAVING
          INFORMATION FOR CONTROLLING
          BUFFERED STATE OF MARKUP ...
INVENTORS: Hyun-Kwon CHUNG et al
SERIAL NO.:
DOCKET NO.: 1793.1073

FIG. 19

TITLE: DATA STORAGE MEDIUM HAVING
INFORMATION FOR CONTROLLING
BUFFERED STATE OF MARKUP ...
INVENTORS: Hyun-Kwon CHUNG et al
SERIAL NO.:
DOCKET NO.: 1793.1073

FIG. 20